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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,987	11/26/2003	Leonard Ciprian Mosescu	MSFT-2835/ 306097.01	9026
41505 7590 07/12/2007 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER COLAN, GIOVANNA B	
			ART UNIT 2162	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/722,987

Applicant(s)

MOSESCU, LEONARD CIPRIAN

Examiner

Giovanna Colan

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2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 - 7, 10 - 19, 22 - 32, and 34 - 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 7, 10 - 19, 22 - 32, and 34 - 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is issued in response to applicant filed request for continued examination (RCE) on 04/26/2007.
2. Claims 1, 5, 13, 17, 25, and 29 have been amended. No claims were added. Claims 8 – 9, 20 – 21, and 33 were canceled.
3. Claims 1 – 7, 10 – 19, 22 – 32, and 34 – 36 are pending in this application.

### ***Response to Arguments***

4. Applicant's arguments with respect to amended claims 1, 5, 13, 17, 25, and 29 have been considered but are moot in view of the new ground(s) of rejection.

### ***Continued Examination Under 37 CFR 1.114***

5. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/11/2006 has been entered.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 13 – 19, and 22 – 24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 13 is directed to non-statutory subject matter because the claim recites: “computer readable medium” in line 1, which is further defined a “carrier wave” in the specification of the disclosure (See – Paragraph [0026], lines 3 – 5 and 12 – 14, Applicant’s specification). As further discussed bellow, “carrier wave” or “carrier signal” is not statutory since no requisite functionality is present to satisfy the practical application requirement.

When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement.

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”). Such a result would exalt form over substance. In re *Sarkar*, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) (“[E]ach invention must

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be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under § 101, the claimed invention, as a whole, must be evaluated for what it is.") (quoted with approval in *Abele*, 684 F.2d at 907, 214 USPQ at 687). See also *In re Johnson*, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) ("form of the claim is often an exercise in drafting"). Thus, nonstatutory music is not a computer component, and it does not become statutory by merely recording it on a compact disk. Protection for this type of work is provided under the copyright law.

When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory and should be rejected under 35 U.S.C. 101. In addition, USPTO personnel should inquire whether there should be a rejection under 35 U.S.C. 102 or 103. USPTO personnel should determine whether the claimed nonfunctional descriptive material be given patentable weight. USPTO personnel must consider all claim limitations when determining patentability of an invention over the prior art. In *re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 403-04 (Fed. Cir. 1983). USPTO personnel may not disregard claim limitations comprised of printed matter. See *Gulack*, 703 F.2d at 1384, 217 USPQ at 403; see also *Diehr*, 450 U.S. at 191, 209 USPQ at 10. However, USPTO personnel need not give patentable weight to printed matter absent a new and unobvious functional relationship between the printed matter and the substrate. See *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994); *In re Ngai*, 367 F.3d 1336, 70 USPQ2d 1862 (Fed. Cir. 2004).

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Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

**Examiner asserts that all claims should be checked for clarification.**

**Appropriate action is required.**

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 – 7, 10 – 19, 22 – 32, and 34 – 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green (US Patent App. Pub. No. 2002/0129012 A1, published: September 12, 2002) in view of Beach et al. (Beach hereinafter) (US 2003/0014753 A1).

Regarding Claim 1, Green discloses a method for searching data in an electronic device comprising:

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storing a plurality of first character strings and corresponding second character strings (Page 1, [0005], lines 4 – 7, Green<sup>1</sup>);

receiving a query (Page 2, [0024], lines 7 – 10, Green); and

searching the stored character strings responsive to the query by receiving a character (Page 1, [0005], lines 1 – 4, Green), appending said character to previously received characters if any (Page 6, [0050], lines 14 – 17, Green<sup>2</sup>), performing a prefix search of received characters on the stored second character strings (Page 3, [0032], lines 8 – 11, Green), and returning a set of first character strings stored with the second character strings that match the prefix search (Page 3, [0032], lines 8 – 19, Green),

wherein receiving the character comprises receiving input from an input device (Page 2 and 4, [0024] and [0036], lines 7 – 10 and 22 – 25, the computer 12; respectively, Green), and

determining the character from a set of characters that corresponds to the received input (Page 2, [0026], lines 4 – 10, word number sets are generated for each term in the query, Green).

Green also discloses: the input device, and keys that corresponds to unique subset of an alphabet (Page 2, [0026], lines 1 – 10, “and associates each word with a unique identifying number...The word number sets are ultimately passed to a document retrieving module 38 that accesses a document look-up table 28, stored with lexicon 22 on disk 18, whose function is to relate word numbers to documents containing the

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<sup>1</sup> Wherein the words correspond to the first character string claimed; and the identifying number corresponds to the second character strings claimed.

<sup>2</sup> Wherein the step of including and adding corresponds to the step of appending as claimed.

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associated words”, Green). However, Green does not explicitly disclose that the input device comprises a plurality of keys. On the other hand, Beach discloses that: the input device comprises a plurality of keys (Page 1, [0009], lines 5 – 10, Beach), and each key corresponds to a unique subset of an alphabet (Page 4, [0051], lines 1 – 3, Beach).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Beach’s teachings to the system Green. Skilled artisan would have been motivated to do so, as suggested by Beach (Page 1, [0009], lines 9 – 13, Beach), to provide a type- ahead feature, so that search terms may be rapidly located in the appropriate index simply by entering one or more of the leading characters of the search terms. In addition, both of the references (Green and Beach) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, prefix search, and matching. This close relation between both of the references highly suggests an expectation of success.

Regarding Claim 2, the combination of Green in view of Beach discloses a method, further comprising receiving one of the first character strings (Page 1, [0005], lines 13 – 14, in response to a search string, Green), and generating the corresponding second character string (Page 1, [0005], lines 15 – 18, set of characters from the search string, Green).



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Regarding Claim 3, the combination of Green in view of Beach discloses a method, wherein the receiving the first character string comprises:

(A) receiving an input character (Page 1 and 6, [0005] – [0050], lines 13 – 14 and 6 – 8, the bit pattern; respectively, Green);

(B) appending said input character to previously received input characters if any (Page 6, [0050], lines 14 – 17, the 1 – bit is included in the converted version, Green);

(C) repeating steps (A) and (B) for each additional character received (Page 6, [0049], lines 1 – 3, Green<sup>3</sup>).

Regarding Claim 4, the combination of Green in view of Beach discloses a method, wherein generating the second character string comprises:

mapping a first set of characters to a second set of characters (Page 4, [0034], lines 5 – 7, Green); and

building the second character string from the second set of characters using the mapping and the first character string (Page 4, [0034], lines 1 – 5, appropriate values can be selected by mapping, Green).

Regarding Claim 5, the combination of Green in view of Beach discloses a method, wherein each of the characters in the second set of characters corresponds to an key on the input device (Page 2, [0026], lines 1 – 10, “and associates each word with a unique identifying number...The word number sets are ultimately passed to a

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<sup>3</sup> Wherein the step of processing multiple words implies that the steps are repeated as claimed.

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document retrieving module 38 that accesses a document look-up table 28, stored with lexicon 22 on disk 18, whose function is to relate word numbers to documents containing the associated words”, Green; and Page 1, [0009], lines 5 – 10, Beach), and each of the characters in the first set of characters corresponds to a letter of an alphabet (Page 4, [0036], lines 18 – 22, Green).

Regarding Claim 6, the combination of Green in view of Beach discloses a method, further comprising storing the mapping as a table (Page 4, [0034], lines 7 – 10, Green).

Regarding Claim 7, the combination of Green in view of Beach discloses a method, wherein the storing as a table comprises:

storing each of the characters in the second set of characters in a respective row in a first column of the table (Fig. 4, item 22, “1”, Page 3, [0031], lines 8 – 12, Green); and

storing an associated subset of characters of the first set of characters in a respective row in a second column of the table (Fig. 4, item 22, “and” , Page 3, [0031], lines 25 – 29, adjacent columns of the character look-up table, Green).

Regarding Claim 10, the combination of Green in view of Beach discloses a method, further comprising repeating the steps (Page 6, [0049], lines 1 – 3, Green<sup>4</sup>) of

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<sup>4</sup> Wherein the step of processing multiple words implies that the steps are repeated as claimed.

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appending (Page 6, [0050], lines 14 – 17, the 1 – bit is included in the converted version, Green), performing a prefix search, and returning the set, in response to receiving a further character (Page 3, [0032], lines 8 – 19, Green).

Regarding Claim 11, the combination of Green in view of Beach discloses a method, wherein returning the set of first character strings comprises displaying the set of first character strings corresponding to the second character strings that match the prefix search on a display device (Page 3, [0032], lines 8 – 19, Green; and Page 1, [0018], lines 14 – 21, Beach).

Regarding Claim 12, the combination of Green in view of Beach discloses a method, further comprising:

receiving a first character string selection of the set of first character strings shown on the display device (Page 1, [0005], lines 4 – 7, Green<sup>5</sup>); and

displaying the set of character strings stored with the first character string selection on a display device (Page 3, [0032], lines 8 – 19, Green; and Page 1, [0018], lines 14 – 21, Beach).

Regarding Claim 13, the combination of Green in view of Beach discloses a computer-readable medium having stored thereon computer-executable instructions for performing a method for searching data in an electronic device comprising:

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<sup>5</sup> Wherein the words correspond to the first character string claimed.

storing a plurality of first character strings and corresponding second character strings (Page 1, [0005], lines 4 – 7, Green<sup>6</sup>);

receiving a query (Page 2, [0024], lines 7 – 10, Green);

searching the stored character strings responsive to the query by receiving a character (Page 1, [0005], lines 1 – 4, Green), appending said character to previously received characters if any (Page 6, [0050], lines 14 – 17, Green<sup>7</sup>), performing a prefix search of received characters on the stored second character strings (Page 3, [0032], lines 8 – 11, Green), and returning a set of first character strings stored with the second character strings that match the prefix search (Page 3, [0032], lines 8 – 19, Green);

receiving the character comprises receiving input from an input device (Page 2 and 4, [0024] and [0036], lines 7 – 10 and 22 – 25, the computer 12; respectively, Green); and

determining the character from a set of characters that corresponds to the received input (Page 2, [0026], lines 4 – 10, word number sets are generated for each term in the query, Green), wherein the input device comprises a plurality of keys (Page 1, [0009], lines 5 – 10, Beach), and each key corresponds to a unique subset of an alphabet (Page 2, [0026], lines 1 – 10, “and associates each word with a unique identifying number...The word number sets are ultimately passed to a document retrieving module 38 that accesses a document look-up table 28, stored with lexicon 22 on disk 18, whose function is to relate word numbers to documents containing the associated words”, Green; and Page 4, [0051], lines 1 – 3, Beach).

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<sup>6</sup> Wherein the words correspond to the first character string claimed; and the identifying number

Regarding Claim 14, the combination of Green in view of Beach discloses a computer-readable medium, further comprising computer-executable instructions for receiving one of the first character strings (Page 1, [0005], lines 13 – 14, in response to a search string, Green), and generating the corresponding second character string (Page 1, [0005], lines 15 – 18, set of characters from the search string, Green).

Regarding Claim 15, the combination of Green in view of Beach discloses a computer-readable medium, wherein the receiving the first character string comprises computer-executable instructions for:

(A) receiving an input character (Page 1 and 6, [0005] – [0050], lines 13 – 14 and 6 – 8, the bit pattern; respectively, Green);

(B) appending said input character to previously received input characters if any (Page 6, [0050], lines 14 – 17, the 1 – bit is included in the converted version, Green);

(C) repeating steps (A) and (B) for each additional character received (Page 6, [0049], lines 1 – 3, Green<sup>8</sup>).

Regarding Claim 16, the combination of Green in view of Beach discloses a computer-readable medium, wherein generating the second character string comprises computer-executable instructions for:

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corresponds to the second character strings claimed.

<sup>7</sup> Wherein the step of including and adding corresponds to the step of appending as claimed.

<sup>8</sup> Wherein the step of processing multiple words implies that the steps are repeated as claimed.

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mapping from a first set of characters to a second set of characters (Page 4, [0034], lines 5 – 7, Green); and

building the second character string from the second set of characters using the mapping and the first character string (Page 4, [0034], lines 1 – 5, appropriate values can be selected by mapping, Green).

Regarding Claim 17, the combination of Green in view of Beach discloses a computer-readable medium, wherein each of the characters in the second set of characters corresponds to key on the input device (Page 2, [0026], lines 1 – 10, “and associates each word with a unique identifying number...The word number sets are ultimately passed to a document retrieving module 38 that accesses a document look-up table 28, stored with lexicon 22 on disk 18, whose function is to relate word numbers to documents containing the associated words”, Green; and Page 1, [0009], lines 5 – 10, Beach), and each of the characters in the first set of characters corresponds to a letter of an alphabet (Page 4, [0036], lines 18 – 22, Green).

Regarding Claim 18, the combination of Green in view of Beach discloses a computer-readable medium, further comprising computer-executable instructions for storing the mapping as a table (Page 4, [0034], lines 7 – 10, Green).

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Regarding Claim 19, the combination of Green in view of Beach discloses a computer-readable medium, wherein the storing as a table comprises computer-executable instructions for:

storing each of the characters in the second set of characters in a respective row in a first column of the table (Fig. 4, item 22, "1", Page 3, [0031], lines 8 – 12, Green); and

storing an associated subset of characters of the first set of characters in a respective row in a second column of the table (Fig. 4, item 22, "and", Page 3, [0031], lines 25 – 29, adjacent columns of the character look-up table, Green).

Regarding Claim 22, the combination of Green in view of Beach discloses a computer-readable medium, further comprising computer-executable instructions for repeating the steps (Page 6, [0049], lines 1 – 3, Green<sup>9</sup>) of appending (Page 6, [0050], lines 14 – 17, the 1 – bit is included in the converted version, Green), performing a prefix search, and returning the set, in response to receiving a further character (Page 3, [0032], lines 8 – 19, Green)

Regarding Claim 23, the combination of Green in view of Beach discloses a computer-readable medium, wherein returning the set of character strings comprises displaying the set of first character strings corresponding to the second character strings

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<sup>9</sup> Wherein the step of processing multiple words implies that the steps are repeated as claimed.

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that match the prefix search on a display device (Page 3, [0032], lines 8 – 19, Green; and Page 1, [0018], lines 14 – 21, Beach).

Regarding Claim 24, the combination of Green in view of Beach discloses a computer-readable medium, further comprising computer-executable instructions for:

receiving a first character string selection of the set of first character strings shown on the display device (Page 1, [0005], lines 4 – 7, Green<sup>10</sup>; and Page 1, [0018], lines 14 – 21, Beach); and

displaying the set of character strings stored with the first character string selection on a display device (Page 3, [0032], lines 8 – 19, Green; and Page 1, [0018], lines 14 – 21, Beach).

Regarding Claim 25, the combination of Green in view of Beach discloses a data searching system, comprising:

a storage device for storing a plurality of first character strings and corresponding second character strings (Fig. 1, item 18, Page 2, [0024], lines 4 – 7, Green);

an input device for receiving a query (Fig. 1, item 12, Page 2, [0024], lines 4 – 7, Green);

a display device for displaying a set of character strings (Page 1, [0018], lines 14 – 21, Beach); and

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<sup>10</sup> Wherein the words correspond to the first character string claimed.



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a processor for searching the stored character strings responsive to the query by receiving a character (Page 7, [0055], lines 12 – 15, Green), appending said character to previously received characters if any (Page 6, [0050], lines 14 – 17, the 1 – bit is included in the converted version, Green), performing a prefix search of received characters on the stored second character strings (Page 3, [0032], lines 8 – 11, Green), and providing to the display a set of character strings stored with the second character strings that match the prefix search (Page 3, [0032], lines 8 – 19, Green; and Page 1, [0018], lines 14 – 21, Beach), wherein the input device comprises a plurality of keys (Page 1, [0009], lines 5 – 10, Beach), and each key corresponds to a unique subset of an alphabet (Page 2, [0026], lines 1 – 10, “and associates each word with a unique identifying number...The word number sets are ultimately passed to a document retrieving module 38 that accesses a document look-up table 28, stored with lexicon 22 on disk 18, whose function is to relate word numbers to documents containing the associated words”, Green; and Page 4, [0051], lines 1 – 3, Beach).

Regarding Claim 26, the combination of Green in view of Beach discloses a system, wherein the processor receives the first character strings from the input device (Page 1, [0005], lines 13 – 14, in response to a search string, Green), and generates the second character strings corresponding to the first character strings (Page 1, [0005], lines 15 – 18, set of characters from the search string, Green).

Regarding Claim 27, the combination of Green in view of Beach discloses a system, wherein the processor is adapted to receive the first character string by

(A) receiving an input character (Page 1 and 6, [0005] – [0050], lines 13 – 14 and 6 – 8, the bit pattern; respectively, Green);

(B) appending said input character to previously received input characters if any (Page 6, [0050], lines 14 – 17, the 1 – bit is included in the converted version, Green); and

(C) repeating steps (A) and (B) for each additional character received (Page 6, [0049], lines 1 – 3, Green<sup>11</sup>).

Regarding Claim 28, the combination of Green in view of Beach discloses a system, wherein the processor generates the second character strings by mapping a first set of characters to a second set of characters (Page 4, [0034], lines 5 – 7, Green), and building the second character string from the second set of characters using the mapping and the first character string (Page 4, [0034], lines 1 – 5, appropriate values can be selected by mapping, Green).

Regarding Claim 29, the combination of Green in view of Beach discloses a system, wherein each of the characters in the second set of characters corresponds to an input point on the input device (Page 2 and 4, [0024] and [0036], lines 7 – 10 and 22

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<sup>11</sup> Wherein the step of processing multiple words implies that the steps are repeated as claimed.

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– 25, the computer 12; respectively, Green), and each of the characters in the first set of characters corresponds to a letter of an alphabet (Page 4, [0036], lines 18 – 22, Green).

Regarding Claim 30, the combination of Green in view of Beach discloses a system, wherein the storage device comprises a table for storing the mapping (Page 4, [0034], lines 7 – 10, Green).

Regarding Claim 31, the combination of Green in view of Beach discloses a system, wherein the table comprises:

a respective row in a first column of the table for storing each of the characters in the second set of characters (Fig. 4, item 22, “1”, Page 3, [0031], lines 8 – 12, Green); and

a respective row in a second column of the table for storing an associated subset of characters of the first set of characters (Fig. 4, item 22, “and”, Page 3, [0031], lines 25 – 29, adjacent columns of the character look-up table, Green).

Regarding Claim 32, the combination of Green in view of Beach discloses a system, wherein the processor determines the character from a set of characters that corresponds to the received input (Page 7, [0055], lines 10 – 12, Green).

Regarding Claim 34, the combination of Green in view of Beach discloses a system, wherein the processor repeats the steps (Page 6, [0049], lines 1 – 3, Green<sup>12</sup>) of appending (Page 6, [0050], lines 14 – 17, the 1 – bit is included in the converted version, Green), performing a prefix search, and returning the set, in response to receiving a further character (Page 3, [0032], lines 8 – 19, Green).

Regarding Claim 35, the combination of Green in view of Beach discloses a system, wherein the display device displays the set of first character strings corresponding to the second character strings that match the prefix search (Page 3, [0032], lines 8 – 19, Green; and Page 1, [0018], lines 14 – 21, Beach).

Regarding Claim 36, the combination of Green in view of Beach discloses a system, wherein the input device receives a first character string selection of the set of first character strings shown on the display device (Page 1, [0005], lines 4 – 7, Green<sup>13</sup>; and Page 1, [0018], lines 14 – 21, Beach), and the display device displays the set of character strings stored with the first character string selection (Page 3, [0032], lines 8 – 19, Green; and Page 1, [0018], lines 14 – 21, Beach).

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<sup>12</sup> Wherein the step of processing multiple words implies that the steps are repeated as claimed.

***Prior Art Made Of Record***

1. Green (US Patent App. Pub. No. 2002/0129012 A1, published: September 12, 2002) discloses a document retrieval system and search method using word set and character look-up tables.
2. Fujisaki et al. (US Patent No. 5,963,666, issued: October 5, 1999) discloses a confusion matrix mediated word prediction.
3. Luk et al. (US Patent App. Pub. No. 2003/0187856 A1, filed: April 1, 2002) discloses a database and method for storing a searchable set of keywords.
4. Beach et al. (Beach hereinafter) (US 2003/0014753 A1).

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<sup>13</sup> Wherein the words correspond to the first character string claimed.

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***Points Of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan  
Examiner  
Art Unit 2162  
June 26, 2007

  
CAM-Y TRUONG  
PRIMARY EXAMINER